

REMARKS

Reconsideration and allowance of the present patent application based on the following remarks are respectfully requested.

By this Amendment, claims 1-6 are amended. Support for the amendments to the claims may be found throughout the original description. No new matter has been added. Claims 14-20 are withdrawn from further examination. Accordingly, after entry of this Amendment, claims 1-20 will remain pending in the patent application.

Applicant appreciates the Examiner's indication that claims 1-3 and 7-13 are allowed. Claims 1-3 are presented with minor informal amendments that have been made without any intention of narrowing the scope of any of the claims (and indeed broadening the claims in some circumstances).

Claims 4-6 were objected to for various informalities noted in the Office Action. In response, claims 4-5 are amended to delete the term "further." In addition, claim 6 is amended to clarify that the one or more different target portions are reacted in the presence of the composition or a further composition, the further composition comprising one or more compounds selected from 1-alkenes and 1-alkynes. Support for this amendment may be found, for example, in the embodiment described at page 15, lines 31-3 and page 16, lines 1-8 of the present patent application. The amendments to claims 4-6 obviate this objection. Accordingly, reconsideration and withdrawal of the objection to claims 4-6 are respectfully requested.

Claim 4 was rejected under 35 U.S.C. §1002(b) based on U.S. Pub. No. 2005/0106401 to Buriak *et al.* (hereinafter "Buriak"). The rejection is respectfully traversed.

Claim 4 recites a device manufacturing method comprising, *inter alia*, "reacting one or more target portions with a composition comprising one or more compounds selected from 1-alkenes and 1-alkynes, to covalently attach said one or more compounds to said target portion(s); and (c1) subsequent to reacting the one or more target portions, reacting at least a part of said background portion with a first composition comprising one or more compounds selected from 1-alkenes and 1-alkynes." The cited portions of Buriak do not disclose, teach or suggest these aspects of claim 4.

By way of review, the cited portions of Buriak disclose a method for covalently modifying the surface of silicon through the attachment of alkynes. *See* Buriak at paragraph 35. The cited portions of Buriak disclose that alkynes can be attached by cathodic or anodic electrografting. *Id.*

The Office Action refers to paragraphs 45 and 46 of Buriak as allegedly disclosing, teaching or suggesting the aspects of reacting one or more target portions with a composition comprising one or more compounds selected from 1-alkenes and 1-alkynes and reacting at least a part of said background portion with a first composition comprising one or more compounds selected from 1-alkenes and 1-alkynes. Specifically, the Office Action refers to the “functional groups” and “nonfunctionalized silicon hydride groups” of paragraphs 45 and 46 as being respectively the target and background portions of claim 4. Applicant respectfully disagrees.

The “functional group” referred to in paragraph 45 of Buriak merely corresponds to the reactive part of the alkyne molecule. *See* Buriak at paragraph 45 “[t]he functional groups present on any of the alkyne reactants are preferably in a ‘protected’ form during the electrodeposition step and are thereafter deprotected on the surface to provide reactive sites for further surface functionalization, i.e., for coupling to biologically significant molecules using standard ester- or amide-forming coupling techniques.” Thus, the term “functional group” of Buriak does not correspond to a target portion on the substrate.

Further, the term “nonfunctionalized silicon hydride group” of paragraph 46 of Buriak does not correspond to the background portion of a substrate. Quite to the contrary, “nonfunctionalized silicon hydride groups” of paragraph 46 relate to the unmasked portions of the silicon substrate that is treated by the alkyne. In other words, the “nonfunctionalized silicon hydride groups” of paragraph 46 refer to the target portions of the silicon substrate (as opposed to the background portion).

With this said, Applicant respectfully submits that the cited portions of Buriak merely disclose that the electrografting procedures can be applied to target portions of the silicon substrate defined by photolithography. *See* Buriak at paragraph 46 “patterns of covalently bound species derived from alkynes on the silicon surface can be formed by sequential photopatterning and electrografting procedures.” In Buriak, the target portions that are defined by photolithography (i.e. the unmasked target portions) are then exposed by one or more alkynes. *See* Buriak at paragraph 46 “[t]he patterned, unmasked, nonfunctionalized silicon hydride groups can be selectively reacted with a particular alkyne or a mixture of alkynes using CEG or AEG.” However, the cited portions of Buriak are silent as to what happens to a background portion of the silicon substrate once the unmasked portions of the silicon substrate, i.e. the target portions of the substrate, are treated with alkynes. For example, unlike claim 4, the cited portions of Buriak do not disclose, teach or suggest that at least a part of the background portion of the silicon is reacted with a first composition

comprising one or more compounds selected from 1-alkenes and 1-alkynes, subsequent to reacting with the one or more target portions. Accordingly, Applicant respectfully submits that the cited portions of Buriak do not disclose, teach or suggest each and every feature recited by claim 4 and, as a result, cannot anticipate this claim.

Accordingly, reconsideration and withdrawal of the rejection of claim 4 under 35 U.S.C. §1002(b) based on Buriak are respectfully requested.

Claims 5 and 6 were objected to, but would be allowable if rewritten in independent form. However, Applicant respectfully submits that claims 5 and 6 are patentable for at least the same reasons provided above for claim 4.

All objections and rejections having been addressed, it is respectfully submitted that the present application is in a condition for allowance and a Notice to that effect is earnestly solicited.

If any point remains at issue which the Examiner feels may best be resolved through a personal or telephone interview, please contact the undersigned at the telephone number below.

Please charge any fees associated with the submission of this paper to Deposit Account Number 033975. The Commissioner for Patents is also authorized to credit any over payments to the above-referenced Deposit Account.

Respectfully submitted,

PILLSBURY WINTHROP SHAW PITTMAN LLP

  
CHRISTOPHE F. LAIR

Reg. No. 54248

Tel. No. 703.770.7797

Fax No. 703.770.7901

JSB/CFL/smm  
P.O. Box 10500  
McLean, VA 22102  
(703) 770-7900